CLAIMS

What is claimed is:

1. A multi-layer printed wiring board comprising:

a first printed wiring assembly including a printed wiring board, and components mounted on a first surface of the printed wiring board, the components and first surface being covered by a layer of conformal material; and

a first conductive pattern which is not part of the first printed wiring assembly, wherein the layer of conformal material is positioned between the first conductive pattern and the first printed wiring assembly.

2. The multi-layer printed wiring board of claim 1 wherein a plated through hole passes through the layer of conformal material and electrically couples at least a portion of the first conductive pattern to the first printed wiring assembly.

3. The multi-layer printed wiring board of claim 1 wherein the first conductive pattern is part of a second printed wiring assembly having components mounted on it, and the conformal layer positioned between the first conductive layer and the first printed wiring assembly encapsulates at least some of the components of each of the first and second printed wiring assemblies.

4. The multi-layer printed wiring board of claim 1 wherein at least one of the encapsulated components is a packaged integrated circuit.

5. The multi-layer printed wiring board of claim 1 wherein at least one of the encapsulated components is an un-packaged integrated circuit.

6. The multi-layer printed wiring board of claim 1 wherein at least one of the encapsulated components comprises leads electrically coupling it to the printed wiring board.

7. A method of forming a multi-layer printed wiring board comprising:

providing a first printed wiring assembly;

encapsulating at least some components of the printed wiring assembly in a layer of conformal material to form an inner layer;

coupling at least one additional conductive layer to the inner layer such that the conformal layer is positioned between the at least one additional conductive layer and the printed wiring assembly.

8. The method of claim 7 further comprising forming a conductive through hole passing through the layer of conformal material, the through hole electrically connecting the first printed wiring assembly to the at least one additional conductive layer.

9. The method of claim 7 wherein the step of coupling the at least one additional conductive layer to the inner layer comprises providing a second printed wiring assembly and laminating the second printed wiring assembly to the first printed wiring assembly via the layer of conformal material such that the layer of conformal material encapsulates at least some components of each of the first and second printed wiring assemblies.